

**DECLARATION
Utility Application**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled CHANNEL-LESS SEPARATION OF BIOPARTICLES ON A BIOELECTRONIC CHIP BY DIELECTROPHORESIS

the specification of which

(Check One)

is attached hereto.

was filed on January 30, 1998 as United States Application Serial No. 09/016,596
and was amended on -----
(if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above. I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(1). I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

| Application Number | Country | Date of Filing | Priority Claimed Yes | No |
|--------------------|---------|----------------|-------------------------|----|
| | | | | |

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

| Application Number | Date of Filing | Status-Patented, Pending or Abandoned |
|--------------------|-------------------|---|
| 08/709,358 | September 6, 1996 | Pending |

| | | |
|-------------------------|---|--|
| Send Correspondence to: | LYON & LYON LLP 633 W Fifth St., Suite 4700 Los Angeles, CA 90071 | Direct Telephone calls to: (213) 489-1600 OR (714) 751-6606 |
|-------------------------|---|--|

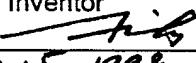
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|-----|------------------------------------|--|--|--|
| | FULL NAME OF INVENTOR | FIRST Name Jing | MIDDLE Initial -- | LAST Name Cheng |
| 201 | RESIDENCE & CITIZENSHIP | City San Diego | State or Foreign Country California | Country of Citizenship China |
| | POST OFFICE ADDRESS | Post Office Address 10706 Caminito Alvarez | City San Diego | State or Country California Zip Code California 92126 |

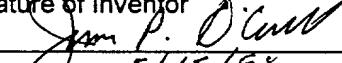
| | | | | |
|-----|------------------------------------|--|--|--|
| | FULL NAME OF INVENTOR | FIRST Name Edward | MIDDLE Initial L. | LAST Name Sheldon, III |
| 202 | RESIDENCE & CITIZENSHIP | City San Diego | State or Foreign Country California | Country of Citizenship United States |
| | POST OFFICE ADDRESS | Post Office Address 12515 Birch Bluff Place | City San Diego | State or Country California Zip Code California 92131 |

| | | | | |
|-----|------------------------------------|--|--|--|
| | FULL NAME OF INVENTOR | FIRST Name Lei | MIDDLE Initial -- | LAST Name Wu |
| 203 | RESIDENCE & CITIZENSHIP | City San Diego | State or Foreign Country California | Country of Citizenship China |
| | POST OFFICE ADDRESS | Post Office Address 14021 Capewood Lane | City San Diego | State or Country California Zip Code California 92128 |

| | | | | |
|-----|------------------------------------|--|--|--|
| | FULL NAME OF INVENTOR | FIRST Name James | MIDDLE Initial P. | LAST Name O'Connell |
| 204 | RESIDENCE & CITIZENSHIP | City San Diego | State or Foreign Country California | Country of Citizenship United States |
| | POST OFFICE ADDRESS | Post Office Address 682 Hoska Drive | City Del Mar | State or Country California Zip Code California 92014 |

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

| | |
|--|-----|
| Signature of Inventor  | 201 |
| Date <u>May 15, 1998</u> | |

| | |
|---|-----|
| Signature of Inventor  | 204 |
| Date <u>5/15/98</u> | |

| | |
|--|-----|
| Signature of Inventor  | 202 |
| Date <u>May 15, 1998</u> | |

| | |
|-----------------------|-----|
| Signature of Inventor | 205 |
| Date | |

| | |
|--|-----|
| Signature of Inventor  | 203 |
| Date <u>5/15/98</u> | |

| | |
|-----------------------|-----|
| Signature of Inventor | 206 |
| Date | |

(Signatures should conform to names as presented at 201 et seq. above.)

JACQUELINE MOORE, PARALEGAL
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

06-29-1998

Docket No. 231/147

SHEET

To the Honorable Commissioner of Patents

100749121

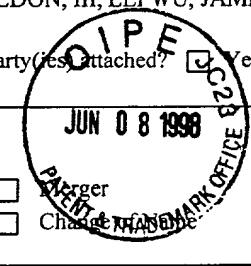
al documents or copy thereof.

1. Name of conveying party(ies):
JING CHENG, EDWARD L. SHELDON, III, LEI WU, JAMES
P. O'CONNELL

Additional name(s) of conveying party(ies) attached? Yes
 No

3. Nature of conveyance:

Assignment
 Security Agreement
 Other _____



Execution Date: May 15, 1998

2. Name and address of receiving party:

Name: NANOGEN, INC.

Street Address: 10398 PACIFIC CENTER COURT

City: SAN DIEGO State: CA Zip: 92121

Additional name(s) & address(es) attached? Yes No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: May 15, 1998

A. Patent Application No(s). 09/016,596

B. Patent No(s).:

Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

6. Total number of applications and patents involved: 1

Name: Corrine M. Freeman

7. Total fee (37 CFR 3.41): \$ 40.00

 Enclosed Charge this Deposit Account if any additional fee is required

8. Deposit Account Number: 12-2475

6/18/1998 WASHING 0000009 122475 09016596

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4 EC:581 40.00 CH

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Date: Jun 8, 1998

Corrine M. Freeman, Reg. No. 37,625

Total number of pages including cover sheet: 7

OMB No. 0651-0011 (exp. 4/94)

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Washington, D.C. 20231

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A S S I G N M E N T

WHEREAS, WE, **JING CHENG**, a citizen of the China residing at 10706 Caminito Alvarez, San Diego, California 92126, **EDWARD L. SHELDON, III**, a citizen of the United States residing at 12515 Birch Bluff Place, San Diego, California 92131, **LEI WU**, a citizen of China residing at 14021 Capewood Lane, San Diego, California 92128, and **JAMES P. O'CONNELL**, a citizen of the United States residing at 682 Hoska Drive, Del Mar, California 92014, (hereinafter referred to as "ASSIGNORS"), have invented and own a certain invention entitled **CHANNEL-LESS SEPARATION OF BIOPARTICLES ON A BIOELECTRONIC CHIP BY DIELECTROPHORESIS** for which application for Letters Patent of the United States of America has been executed on even date herewith; and

WHEREAS, **NANOGEN, INC.**, a corporation organized and existing under and by virtue of the laws of the State of **California** and having its principal place of business at **10398 Pacific Center Court, San Diego, California 92121** (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring the exclusive right, title and interest in, to and under said invention and in, to and under any Patent or similar legal protection to be obtained therefor in the United States of America, its territorial possessions and in any and all countries foreign thereto.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNORS hereby sell, assign, transfer and set over unto the said ASSIGNEE, its successors and assigns, the full and exclusive right, title and interest to said invention and to all Letters Patent or application or similar legal protection, not only in the United States and its territorial possessions, but in all countries foreign thereto to be obtained for said invention by said application, and to any continuation, division, renewal, substitute or reissue thereof or any legal

equivalent thereof in the United States or a foreign country for the full term or terms for which the same may be granted, including all priority rights under the International Convention; and ASSIGNORS hereby authorize and request the Commissioner of Patents and Trademarks to issue said Letters Patent or any legal equivalent thereof to said ASSIGNEE, its successors and assigns, in accordance with this Assignment.

ASSIGNORS hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this Agreement;

ASSIGNORS further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNORS and will testify as to the same in any interference or litigation related thereto and will promptly execute and deliver to ASSIGNEE or its legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents in the United States or in any foreign country, which may be necessary or desirable to carry out the purposes thereof.

WITNESS my hand at San Diego, California,
this 15 day of May, 1998.

Jing May 15, 1998
Jing Cheng

STATE OF CALIFORNIA)
)
) ss
COUNTY OF SAN DIEGO)

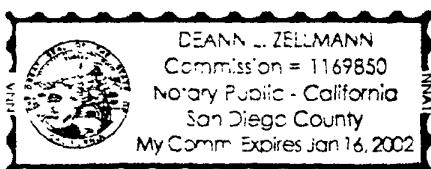
On MAY 15, 1998 before me, DEANN L. ZELLMANN, personally appeared
JING CHENG

personally known to me

- OR -

proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies); and that by his/her/their signature(s) on the instrument the person(s); or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Deann L. Zellmann
Notary Public in and for
said County and State

WITNESS my hand at San Diego, California,
this Fifteenth day of May, 1998.

Edward L. Sheldon, III
Edward L. Sheldon, III

STATE OF CALIFORNIA)
)
COUNTY OF SAN DIEGO) ss

On MAY 15, 1998 before me, DEANN L. ZELLMANN, personally appeared
EDWARD L. SHELDON, III

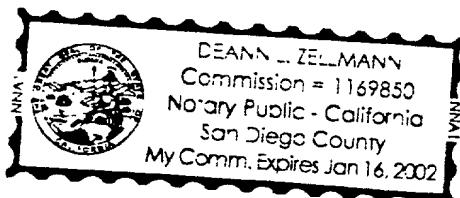
personally known to me

- OR -

proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Deann L. Zellman
Notary Public in and for
said County and State



WITNESS my hand at San Diego, CA,
this 5/15 day of May, 1998.



Lei Wu

STATE OF CALIFORNIA)
)
COUNTY OF SAN DIEGO) ss

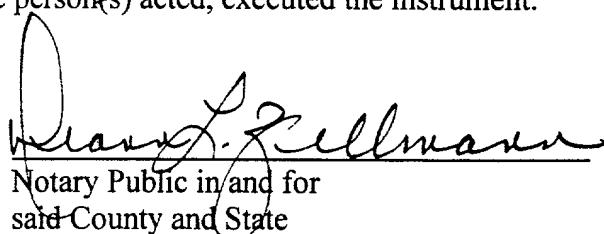
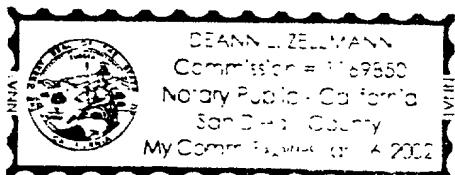
On MAY 15, 1998 before me, DEANN L. ZELLMANN, personally appeared
LEI WU

personally known to me

- OR -

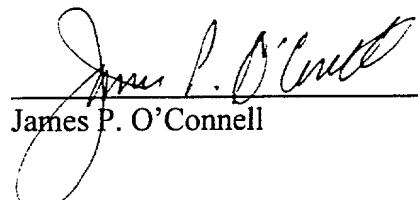
proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies); and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Deann L. Zellmann
Notary Public in and for
said County and State

WITNESS my hand at San Diego, CA,
this 15th day of May, 1998.


James P. O'Connell

STATE OF CALIFORNIA)
)
) ss
COUNTY OF SAN DIEGO)

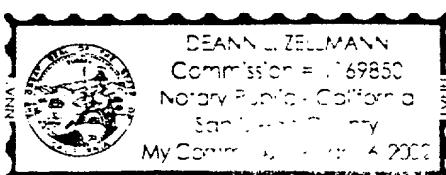
On MAY 15, 1998 before me, DEANN L. ZELLMANN, personally appeared
JAMES P. O'CONNELL

personally known to me

- OR -

proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.




Deann L. Zellmann
Notary Public in and for
said County and State